

"We are forced to the conclusion that, notwithstanding the long experience of plaintiff as a practicing physician and surgeon, extending over a period of more than ten years, and notwithstanding that he may have successfully passed the examination as to his qualifications to practice, it must be here held that he has failed to comply with the provisions of the act in the matter of producing a proper diploma or license, and therefore that he must fail in this proceeding.

"The application for a writ of *mandamus* is denied."

The foregoing decision is signed by Angellotti and concurred in by Shaw, Sloss, Henshaw, Lorigan and McFarland. Now let us cease from this over-ripe anxiety about the constitutionality of the medical practice act. Every essential part of it has been pronounced constitutional. No matter how many Arwines may appear and secure attorneys to fight it, the law will stand. Foolish trial judges there may be who will extend temporary hope to the disgruntled, but do not worry about it; in the long run they will not succeed in upsetting the protection to the public which all the reputable members of our profession in this state have for so long been fighting to maintain.

SOME SETTLED AND UNSETTLED POINTS IN DIETETICS.*

By BOARDMAN REED, M. D., of Los Angeles.

The injurious habits of eating and drinking, with the resulting perverted appetites which are exceedingly prevalent, are responsible for a majority of digestive troubles. They cause also, indirectly at least, a very large share of the chronic affections generally in whatsoever structure or tissue of the body.

When we except the exanthems, malaria, syphilis, tuberculosis and the diseases caused by traumatism, by the metallic poisons and by a few other toxic agents or infections from without, practically all the remaining maladies which afflict us and cut short our lives are now directly or indirectly traceable to autointoxication; and this is only a synonym for poisoning by the products of a faulty metabolism which in turn results in most cases from dietetic errors with or without other unhygienic practices and a bad inheritance. Moreover, there are good reasons for believing that persons who have healthy digestive organs and a normal metabolism much more rarely than others become victims of the beforementioned exogenous affections.

How faulty our standard diet tables are and how harmful the results that may ensue from the consequent excessive ingestion of the proteids, especially, appears from many comparatively recent investigations in physiological chemistry, in metabolism, in autointoxication, etc. Among the more important of these are those made by Bouchard (1), Albu (2), von Noorden (3) and, most striking of all, the experiments and conclusions of our own Chittenden, which are recorded in his book on "Physiological

Economy in Nutrition" (4) and his previous paper on "Autointoxication" (5). Chittenden's book embodies the results of a large number of remarkable experiments carried out under his direction on numerous students, clerks, athletes and men detailed for the purpose from the Hospital Corps of the United States Army, with the strictest possible observance of all the conditions to ensure accuracy.

The experiments demonstrate that healthy men while undergoing heavy and even violent muscular exercise can maintain a nitrogenous equilibrium and preserve their weight, strength, mental activity and feeling of wellbeing undiminished on a ration which contains only 40 to 60 grams of proteid food instead of the 118 grams laid down as necessary by Tait, or the 120 grams required by Atwater. Cereals, vegetables, sugar and fats were substituted for much of the meats and eggs usually eaten, and it is noteworthy that the total fuel value of the daily ration to which the men were limited for quite prolonged periods amounted on the average to less than 2500, instead of the more than 3000, calories or heat-units prescribed by the leading dietetic authorities in the past for a workman of the average size—that is, one weighing from 70 to 75 kilos.

Very many of the leisure class, persons who rarely use their muscles, eat habitually a larger proportion of the proteids and more of all the food elements than are prescribed in the standard minimum food ration which recent exact tests have proved to be excessive even for workmen. We may accept it, therefore, as a settled fact in dietetics that a very large proportion of people eat too much, especially of the proteids, such as fish, meat and eggs, in addition to the considerable amounts of the same food element obtained from the cereals and bakery products, and especially from the beans, peas, milk, cheese, nuts, etc., usually taken.

This large surplus of food eaten, instead of being a trifling error, is really the cause of an enormous amount of ill-health and undoubtedly shortens the life of many who thus indulge, because extra work is imposed upon the liver and kidneys in excreting it. Let any one who doubts this consult the writings of Louis Cornaro, who when given up to die at forty adopted a very abstemious diet, recovered and lived to the age of one hundred and four years, with the enjoyment of all his faculties unimpaired to the last. His life story and also contributions on the same subject by Lord Bacon, Addison and Sir William Temple will be found in a recent volume (6).

It would lead too far to point out here in detail the irrational gastronomic habits and customs which with the help of perverted appetites are responsible for so much mischief; but it is proper to explain why, in the face of the truths just enunciated, an extra generous feeding of tuberculosis patients while kept almost constantly in the open air, or of neurasthenics while stimulated for a few weeks in the rest cure by massage and electricity has proved so generally useful.

In tuberculosis an extraordinary waste is going on which demands the fullest feeding compatible with the digestive capacity; and in neurasthenia there has often been a long period of underfeeding or of one-

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sided feeding which needs to be compensated. But even in these affections crowding of the food beyond the usual amounts by no means agrees with all cases, and there has been of late a notable reaction against it as a routine measure in lung cases. In none of the neurasthenics can it be safely continued beyond a very limited period.

When the stomach is dilated the large quantities of milk given in the usual rest treatment are likely to aggravate, and the same result often follows forced feeding when there are certain complicating conditions, especially a marked deficiency of the gastric juice.

I recall one striking case of this kind which occurred during my practice in Philadelphia. A thin, nervous little woman had lost flesh steadily during an unduly prolonged rest treatment in which food was forced upon her *ad nauseam*, but gained upwards of twenty pounds on a limited diet while the proper attention was being devoted to the needs of her digestive organs.

I know personally that Weir Mitchell in the management of his rest cases has the condition of the viscera carefully studied, including in many of them the gastric secretion; and also that at both the Pottenger Sanatorium in Monrovia and the Barlow Sanatorium in Los Angeles much care is taken to see that the digestive functions of the consumptives are not overtaxed. When their stomachs can not be made to tolerate the reasonably full feeding which is all that is found to be necessary or advantageous, it is modified accordingly. All the nourishment is given them which they can comfortably digest, but forced feeding is not practiced.

Authors are in virtual accord as to the appropriate diet for most of the commoner diseases. In chronic nephritis, however, von Noorden (7) takes strong ground against the somewhat prevalent practice of prescribing a milk diet as a routine treatment and favors only a moderate ingestion of any kind of liquid in the same class of cases.

As to pneumonia, the pendulum seems to have swung in the last thirty years from a low diet and antiphlogistic treatment generally to a rather full and stimulating one with either an expectant or a tonic drug treatment. Whether this change in method is accountable for the markedly increased mortality in pneumonia of late is a question which may be left to those who see more of the disease than I now do.

There are several gastro-intestinal affections as to the proper diet of which authorities differ. This is notably true of those characterized by an excessive secretion of hydrochloric acid, hyperchlorhydria, gastroxynsis, Reichmann's disease and acid gastric catarrh.

A number of gastrologists advise that the subjects of these diseases should be placed on a predominantly proteid diet—one containing much meat especially—because it is both more easily digested and palliates more the pain by combining with a much larger amount of the free acid in the stomach. This nitrogenous regimen is preferred in spite of the fact that it is confessedly more stimulating to the gastric

glands, thus tending to perpetuate the trouble, and, if long continued, must burden the excretory organs to get rid of the abnormal nitrogen surplus. A further result is likely to be a derangement of the metabolism and some form of autotoxemia. Other authors advise that the excess of acid should be immediately neutralized by large enough doses of alkalis and then that the least stimulating articles of diet be prescribed, but that the meats, and especially the meat extracts—beef extracts, beef tea, broths, etc., which are the most stimulating of all foods—should be allowed very sparingly, if at all, in order to avoid further irritation of the already irritated or congested glands.

This point has been fully discussed by me elsewhere (8); and I have emphasized there the fact that while ordinarily a diet in which carbohydrates and fats predominate will, with slow eating and thorough chewing, as is so forcibly inculcated by Fletcher (9), prove most curative in hyperchlorhydria, there are occasional cases in which a different manner of feeding is preferable. In these the stomach is badly infected with yeast and other germs, so that, in addition to the HCL. excess, there are also in it large amounts of the organic acids as a result of fermentation. In such cases the starch foods must be kept at a minimum in the diet, and when butyric acid is present in large amount, milk, cream and sometimes even butter need to be much restricted or withheld entirely; and then such proteids as eggs, fish and chopped beef may have to be given in excess of the normal proportion temporarily until the fermentation can be controlled.

Some points in dietetics which seem to loom up in the eyes of the laity and lay writers, need to be touched upon here. It is considered by many that the worst possible food for any form of dyspepsia is anything containing starch, and especially potatoes. Yet it is a fact that starch and sugar, together making up the carbohydrate class, must in any proper diet compose at least three-fifths of the total nourishment, even according to the old standards which allow altogether too much proteids. Sugar being the most fermentable of all food articles, is badly borne when there is much flatulence in either the stomach or bowels, and often has to be either greatly restricted or forbidden entirely. Consequently starch must in the long run form a chief part of the diet if the nutrition is to be maintained.

As to potatoes, these are rather less fermentable than bread, especially hot or fresh yeast bread, containing less starch and none of yeast germs which tend to produce flatulence. Indeed, I have usually found baked or boiled and mashed white potatoes to agree better with the average flatulent dyspeptic than any other vegetable.

Then the old saying that "one man's meat is another man's poison," which has much of truth in it, is disputed by some writers on hygiene, and this leads to the question as to whether fruit should agree with everybody. There certainly are many persons who have either inherited or acquired such a sensitive condition of their gastro-intestinal mucous

membranes that the more acid fruits—and sometimes any of them—taken raw especially, always irritate, causing griping pain, much gas and frequently diarrhoea.

It is probable, nevertheless, that the fruits, though having small nutritive value along with laxative properties which, in so far, place them rather in the category of medicines than pure foods, are entirely wholesome for the majority of people when taken in moderation.

There remain many interesting questions, among them the propriety of topping off big dinners with rich desserts which tempt always to overeating, and especially with such strong and heavy articles as nuts and cheese. Then there are the stimulating beverages and condiments whose relation to a normal dietary has never yet been entirely settled. It would seem to be high time that our profession should take hold of these vital questions and no longer leave fashions in dining or the arrangement of menus to ignorant or at least wholly unscientific cooks and caterers.

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THE INTENSITY OF THE PULMONIC SOUND IN MITRAL INCOMPETENCE.*

By WM. WATT KERR, M. D.,

It may save frequent explanation if I premise the following remarks by stating that they apply only to cases of mitral incompetence uncomplicated by any other valvular lesion.

The statement is generally made that in cases of mitral incompetence the pulmonic sound is accentuated so long as compensation exists, and in nearly every text-book this change in the second cardiac sound is mentioned as occurring with such regularity as to constitute one of the physical signs diagnostic of mitral regurgitation. My own experience

has been such as to make me doubt whether this changed second sound occurs with such frequency as to warrant us in attributing such a constant value to it, for while I would not go the length of denying the possibility of the pulmonic sound being accentuated in some cases of mitral incompetence, nevertheless it has been heard in such a very small proportion of the cases coming under my observation during the last twenty-five years that its presence always suggests the probability of a co-existing mitral obstruction, a condition that does not necessarily mean actual narrowing of the orifice from adhesion of the segments or growth of vegetations, but may simply indicate an imperfect relaxation of the muscular fibres in the basal ring, so that the auriculo-ventricular opening offers an abnormal degree of resistance to the entering blood stream during diastole.

It is true that in many cases the pulmonic is louder than the aortic sound, but it does not follow that on this account the former is accentuated, because this relative difference between the two factors of the second sound is normal in most people until middle life; and I must say that in mitral incompetence it never has been my fortune to meet an accentuation of the same quality as is so frequently obtained in mitral stenosis. Accentuation is a matter of tone rather than of sound.

Accentuation of the pulmonic sound indicates increased blood pressure in the pulmonary artery at the time of closure of the semilunar valves, but there are both physiological and pathological reasons for questioning whether this condition of affairs invariably exists as a result of mitral insufficiency. We admit that in mitral incompetence there is an increase of pressure in the pulmonary system, but contend that this takes place during ventricular systole, when the semilunar valves are open, and generally is relieved before they close.

In mitral incompetence the strain due to increased pressure in the pulmonary circulation is at its maximum during regurgitation, i. e., during ventricular systole, at a period in the cardiac cycle when the pulmonic valves are open and the direction of the blood current is forwards so that at this time it is impossible for any pressure to be exerted upon the semilunar segments. Furthermore, during ventricular systole the burden of the pulmonary circulation, which in a case of mitral incompetence consists of the volume of blood sent forward by the right ventricle plus the blood already in the pulmonary circulation plus the amount and momentum of blood driven back into the pulmonary circulation by the powerful contraction of the left ventricle, falls upon the wall of the right ventricle and the closed tricuspid valve and dilatation of the right ventricle results, varying in degree according to the amount of mitral regurgitation and the nutritional state of the ventricular walls. When the mitral lesion is slight and the cardiac muscle healthy, all symptoms of strain upon the right heart may be absent or only manifest themselves by the frequent recurrence of the "safety valve" action of the tricuspid during special effort on the part of

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